

CLAIMS

A digital subscriber line transmission system comprising:

an inverse fast Fourier transform circuit generating successive outgoing time domain symbols on a subscriber line from respective groups of digital frequency domain coefficients;

a fast Fourier transform circuit generating groups of digital frequency domain coefficients from respective incoming time domain symbols received on the subscriber line, a current incoming symbol being delayed with respect to a current outgoing symbol by a predetermined time interval; and

means for, during an end portion of a current incoming symbol, subtracting from the signal received on the subscriber line an estimated echo obtained by a filter from a signal portion following the end of the current outgoing symbol, and adding thereto, through said filter, a beginning portion of the current outgoing symbol, wherein said portions have a duration at least equal to said predetermined time interval.

2. The system of claim 1, wherein the filter is a finite impulse response filter having a size adapted for processing samples of the symbols only during said predetermined time interval, comprising means for continuously calculating filter coefficients from the signals received and transmitted on the subscriber line.

3. The system of claim 1, wherein the predetermined time interval is equal to a maximum delay between the incoming and outgoing symbols.

4. The system of claim 1, further comprising:
a FIFO memory receiving the outgoing symbols;
a subtractor arranged for subtracting the outgoing symbols from the output of the delay line;

said filter receiving the output of the subtractor and enabled only during said time interval from the end of each outgoing symbol; and

an adder receiving the output of the filter and said incoming symbols.

5 interval from the end of each outgoing symbol.

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